

Service Bulletin

Title: SBEC135-25-02; EC135 Air Conditioner Condenser Wiring Harness
Blower Motor Connector

Revision	Issue Date	Checked by	Approved by
NC	03-MAR-2025	T. Wiklund	D. Sirbaugh
A	02-MAY-2025		

Summary: The purpose of this Service Bulletin is to provide instructions for replacing the Molex connectors on the condenser blower assembly with the Deutsch connectors. This Service Bulletin is optional and may be performed at the operator's discretion.

Compliance: Optional.

Effectivity: Airbus Helicopters Deutschland models EC135P2, EC135P2+, EC135T2, and EC135T2+ Equipped with the Air Comm Corporation EC135-200-2 thru -5 and EC135-202-1 thru -4 air conditioner system.

Reference: FAA / STC # SR00565DE, Airbus Helicopter Deutschland EC135 Air Conditioning System.

Electrical: No change

Weight & Balance: No change

Labor: Labor hours are an estimate given for information only. It is estimated to take one airframe technician 1 hour.

Approval: The technical aspects of this Service Bulletin are based on FAA approved data.

Discussion:

The Molex motor connectors used in the Air Comm Corporation Condenser Assembly EC135-7000-1 and ES73186-9 are now obsolete and have been replaced with Deutsch connectors as built per EC135-7000-2 (shown in Figure 1) and ES73186-10 (Shown in Figure 2).

When replacing the top-level assembly P/N EC135-7000-1 with new P/N EC135-7000-2, it is necessary to replace both of the aircraft side connectors with new P/N ES59112-13. No further changes are then required.

When replacing only one of the sub-component blowers P/N ES73186-9 with new P/N ES73186-10 in the condenser, it is necessary to update the second blower with connector P/N ES59112-14, as well as the two aircraft side connectors with new P/N ES59112-13. This is required to ensure full assembly configuration control and the assembly must be part-marked accordingly.

If only performing a connector replacement due to connector failure, replace the obsolete Molex connectors on both blowers with the Deutsch connectors to convert the assembly from P/N EC135-7000-1 to P/N EC135-7000-2. The assembly must be part-marked accordingly.

Revision History:

Revision NC is the initial release, no changes.

Revision A adds instructions for performing connector replacement only.

Require Material for Ordering:

ES59112-13 Deutsch Plug Assy – Socket Contacts included (QTY 2)

ES59112-14 Deutsch Receptacle Assy – Pin Contacts included (QTY 2)

Optional Materials for Ordering:

ES59112-34 Socket Contact (Spares for ES59112-13)

ES59112-35 Pin Contact (Spares for ES59112-14)

Procedure:

Warning: Comply with all general instructions and safety instructions per the applicable aircraft AMM.

1. If the top-level assembly P/N EC135-7000-1 was replaced with P/N EC135-7000-2, or if both blower assemblies P/N ES73186-9 were replaced with P/N ES73186-10, skip to step 9. Otherwise, follow steps 1-8 to install ES59112-14 Deutsch Receptacles on any blower assembly not being replaced to convert it to P/N ES73186-10.
2. Remove the Molex connector from any blower assembly not being replaced by trimming the wires as close as possible to the connector to maintain the wire length.
3. Strip the wire insulation back between 0.222 and 0.284 inch [Reference DEUTSCH Field Maintenance Crimp Tool HDT-48-00].
4. Crimp a pin contact ES59112-35 to each of the striped wires using Deutsch tool HDT- 48-00 crimping tool.
5. Insert the red wire into Pin 1, and the black wire into Pin 2 of the Deutsch connector ES59112-14 as shown in the electrical schematic of Figure 3.
6. Ensure contacts are locked in per Figure 4 and engage the wedge lock.
7. Locate the P/N marking on any converted blower assembly and add with indelible ink "SBEC135-25-02".
8. Locate P/N marking on the condenser assembly and add with indelible ink "SBEC135-25-02".
9. After installing or converting both blower assemblies to P/N ES73186-10, locate the existing Molex connectors on the aircraft-side leading to the panel relay. The new aircraft-side connectors will plug into the mating connectors of the Condenser Assembly EC135-7000-2 shown in Figure 1.

10. Trim wires of Molex connectors being replaced (Refer to the electrical schematic in Figure 3 for motor labeling):
 - a) For Blower Assembly No. 1, trim wires ACCA21A14 and ACCA33A14N at the existing connector to maintain wire length.
 - b) For Blower Assembly No. 2, trim wires ACCA22A14 and ACCA34A14N at the existing connector to maintain wire length.
11. Strip the wire insulation back between 0.222 and 0.284 inch [Reference DEUTSCH Field Maintenance Crimp Tool HDT-48-00].
12. Crimp a socket contact ES59112-34 to each of the striped wires using Deutsch tool HDT-48-00 crimping tool.
13. Insert crimped wires as follows (Refer to Figure 4 for contact insertion instructions):
 - a) For Blower Assembly No. 1, insert crimped wire ACCA21A14 into Pin 1 and crimped wire ACCA33A14N into Pin 2 of a Deutsch Connector ES59112-13 as shown in Figure 3.
 - b) For Blower Assembly No. 2, insert crimped wire ACCA22A14 into Pin 1 and crimped wire ACCA34A14N into Pin 2 of a Deutsch Connector ES59112-13 as shown in Figure 3.
14. Ensure contacts are locked in per Figure 4 and engage the wedge lock.
15. Reconnect the Condenser Assembly as shown in Figure 3.

Note: It is not necessary to part mark the assembly with the service bulletin number if installing a new EC135-7000-2.

Note: If necessary, contact removal instructions are shown in Figure 5. Extra pins and sockets are not supplied with connector assembly.

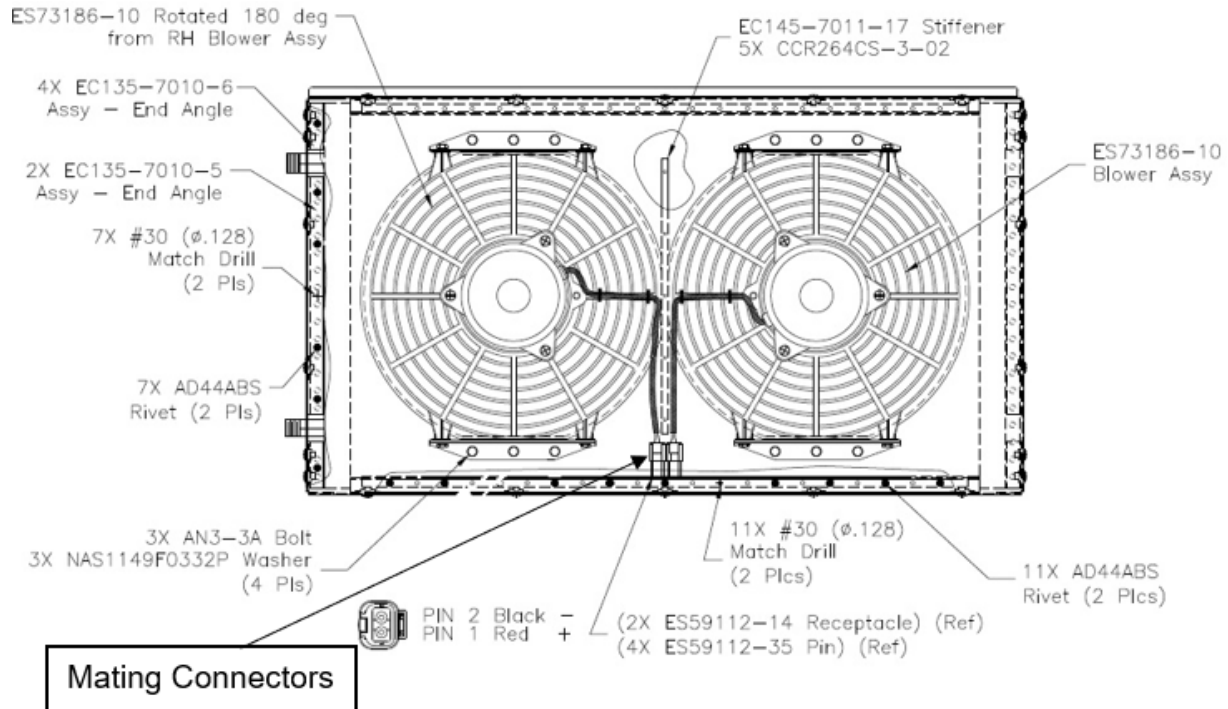


Figure 1: Condenser Assembly EC135-7000-2

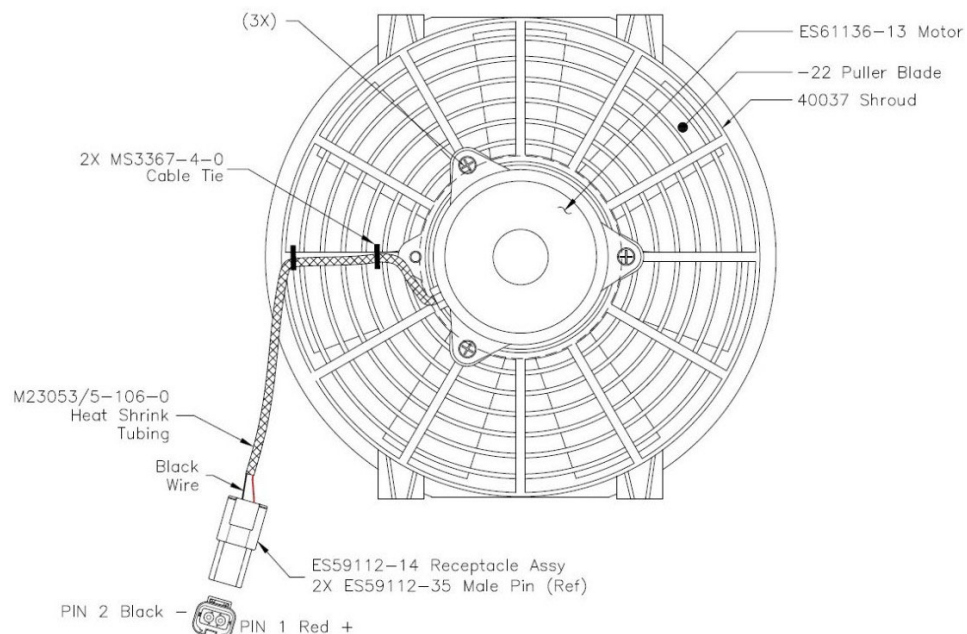


Figure 2: Blower Assembly ES73186-10

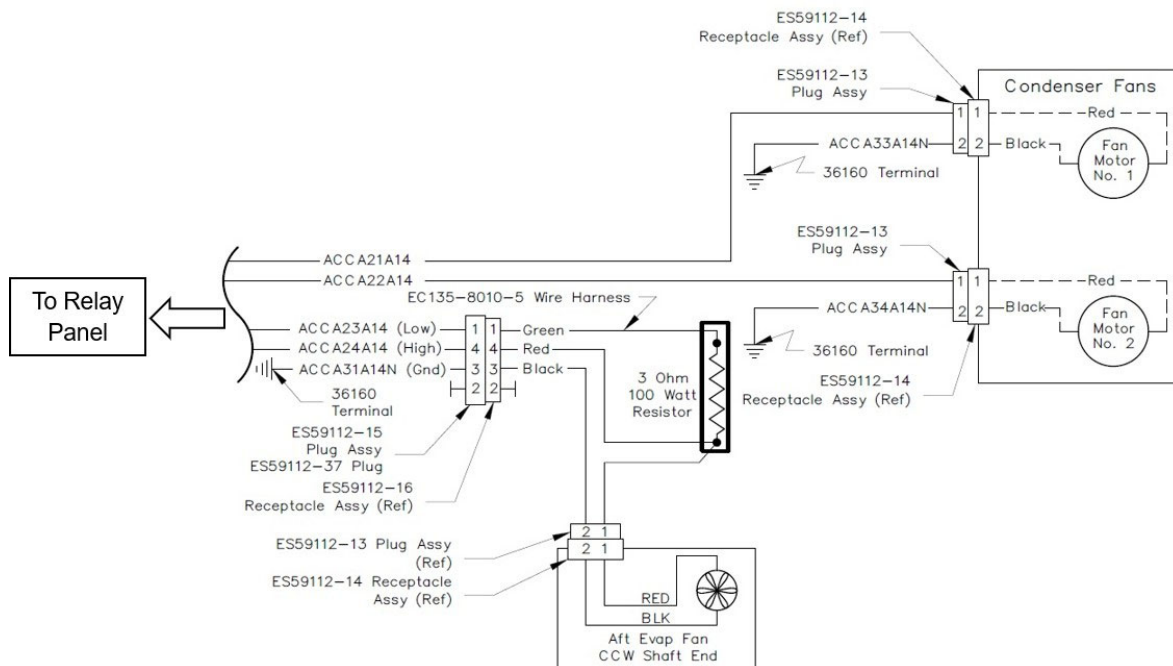
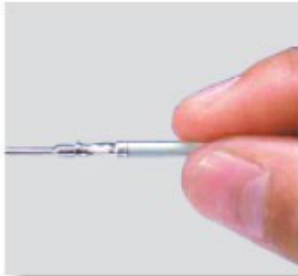


Figure 3: Electrical Schematic

Assembly Contact Insertion (DTM, DT, DTP)



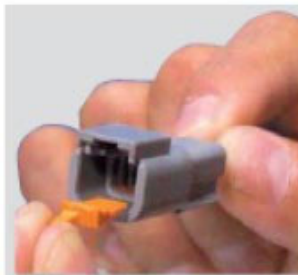
1. Grasp crimped contact approximately 1.0" (25.4mm) behind the contact barrel.



2. Hold connector with rear grommet facing you.

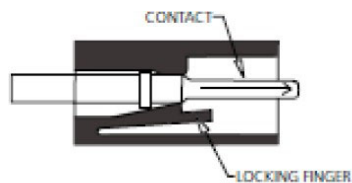


3. Push contact straight into connector grommet until a click is felt. A slight tug will confirm that it is properly locked in place.

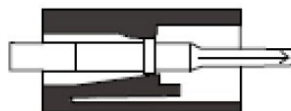


4. Once all contacts are in place, Insert orange wedge: receptades - with half holes aligning with contacts. Plugs - with contacts aligning behind full holes. The orange wedge will snap into place.

NOTE: The receptacle is shown - use the same procedure for plug.



UNLOCKED POSITION



CONTACT INSERTION



CONTACT LOCKED IN POSITION

Figure 4: Contact Insertion

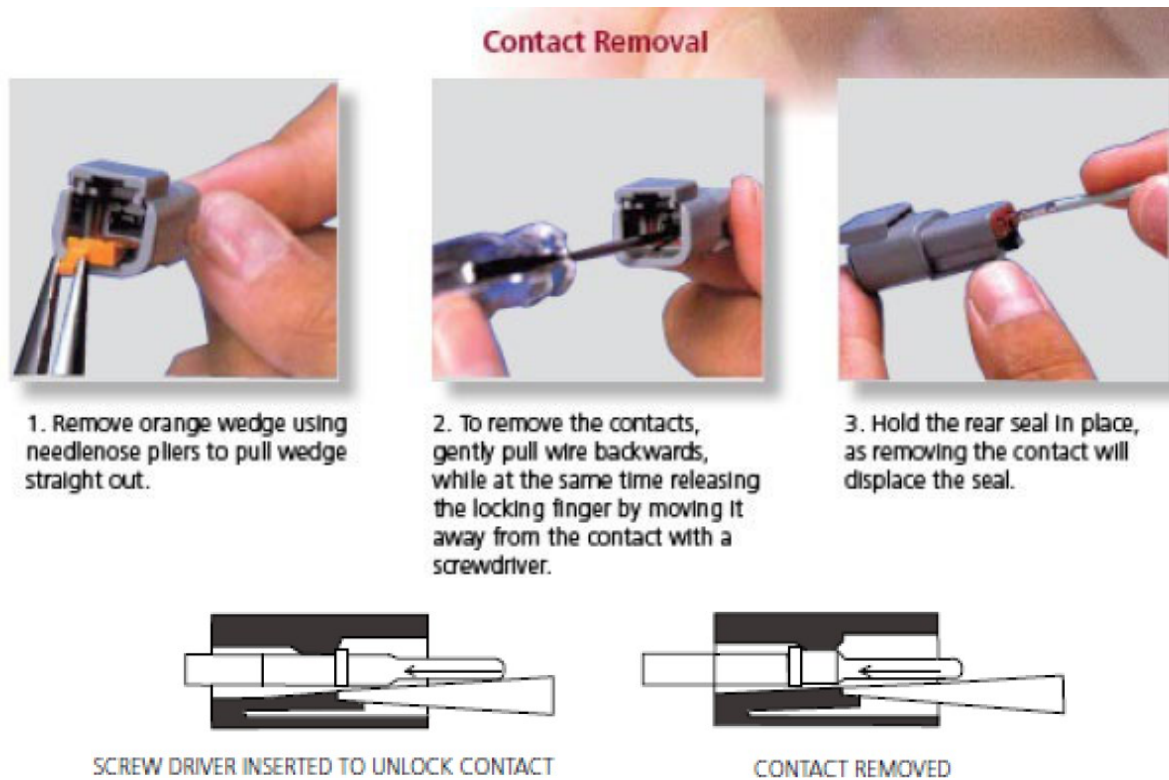


Figure 5: Contact Removal